
My NASA Data - GLOBE Connections

GLOBE Biosphere Protocols & Related ESDE Datasets



My NASA Data features resources for GLOBE protocols that provide connections to NASA datasets in the Earth System Data Explorer, as well as background information for the protocol, student data sheets, and related learning activities. For more information on GLOBE or Biosphere protocols see the resources at the bottom of the page. It is important to note that a particular protocol may support more than one phenomenon and may support phenomena from different spheres. To see how individual protocols relate to a particular phenomenon, you can visit the GLOBE Connection for that phenomenon (i.e., [Phytoplankton Distribution](#), [Plant Growth Patterns](#), [Deforestation](#), etc.)

Related Earth System Data Explorer datasets:

The datasets in My NASA Data's [Earth System Data Explorer](#) which supplement exploration of each protocol are also indicated. These supplemental datasets may measure the same variable or related variables, and they may have a different temporal scale. Specific research questions may also have additional supporting datasets which can be explored. All data available through My NASA Data can be found on the [Data Collections: Earth System Data Explorer](#) page.

Explore the MND GLOBE Connections Datasets spreadsheet to review the range of Biospheric datasets in the Earth System Data Explorer by visiting this [link](#).

Biosphere	
GLOBE Protocol	Earth System Data Explorer Dataset
Biometry	Chlorophyll Concentration
	Monthly Leaf Area Index
	Monthly Normalized Difference Vegetation Index
Carbon Cycle	Monthly Air Column Concentration of CO
	Monthly Concentration of CO2 in Troposphere
Fire Fuel	Land Cover Classification (There are additional data sets for each classification category.)
	Monthly Leaf Area Index
	Monthly Normalized Difference Vegetation Index
Green Up/Green Down	Chlorophyll Concentration
	Monthly Leaf Area Index
	Monthly Normalized Difference Vegetation Index
Land Cover Classification	Land Cover Classification
	• Barren/Desert
	• Closed Shrublands
	• Cropland/Natural Vegetation Mosaics
	• Croplands
	• Deciduous Broadleaf Forest
	• Deciduous Needleleaf Forest
	• Evergreen Broadleaf Forest
	• Evergreen Needleleaf Forest
	• Grasslands
	• Mixed Forest
	• Open Shrublands
	• Permanent Wetlands
	• Savannas
	• Snow and Ice (Permanent)
	• Urban and Built Up
	• Water
	• Woody Savannas

The GLOBE Biosphere protocols related to phenomena or datasets supported by My NASA Data **(MND)** are outlined below. Under each protocol, there is a list of related Earth System Data Explorer datasets.

Biometry

These datasets describe the chlorophyll concentration in oceans, the amount of leaves present at each location on the map and an index that indicates the health of plants on the Earth's surface.

- **Monthly Chlorophyll Concentration**
- **Monthly Leaf Area Index**
- **Monthly Normalized Difference Vegetation Index**

Carbon Cycle

These datasets measure CO and CO₂ in the atmosphere.

- **Monthly Air Column Concentration of CO**
- **Monthly Concentration of CO₂ in Troposphere**

Fire Fuel

These datasets describe the land cover classifications, amount of leaves present at each location on the map and an index which indicates the health of plants on Earth's surface.

- **Yearly All Land Cover Types (There are additional datasets for each classification category.)**
- **Monthly Leaf Area Index**
- **Monthly Normalized Difference Vegetation Index**

Green Up/Green Down

These datasets describe the amount of leaves present at each location on the map and an index that indicates the health of plants on Earth's surface.

- **Monthly Chlorophyll Concentration**
- **Monthly Leaf Area Index**
- **Monthly Normalized Difference Vegetation Index**

Land Cover Classification

This dataset shows the land cover classifications. There are datasets for individual land cover classifications. These data are a snapshot from the late 1990's and early 2000's.

- **Yearly All Land Types**
- **Yearly Barren or Sparsely Vegetated Coverage**
- **Yearly Closed Shrublands Coverage**
- **Yearly Cropland/Natural Vegetation Mosaic Coverage**
- **Yearly Croplands Coverage**
- **Yearly Deciduous Broadleaf Forest Coverage**
- **Yearly Deciduous Needleleaf Forest Coverage**
- **Yearly Evergreen Broadleaf Forest Coverage**

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- Yearly Evergreen Needleleaf Forest Coverage
 - Yearly Grasslands Coverage
 - Yearly Mixed Forest Coverage
 - Yearly Open Shrublands Coverage
 - Yearly Permanent Wetlands Coverage
 - Yearly Savannas Coverage
 - Yearly Snow and Ice Coverage
 - Yearly Urban and Built Coverage
 - Yearly Water Coverage
 - Yearly Woody Savannas Covered

GLOBE Biosphere Protocol Information

[GLOBE Biosphere protocols](#) can be found on the GLOBE website. Each GLOBE protocol page will have information for the protocol, data sheets, and related learning activities. [Online e-Training is available.](#)

GLOBE Protocol Bundles

Protocol bundles are designed to use related protocols from different spheres to investigate different topics. The following protocol bundles include at least one biosphere protocol. The [GLOBE protocol bundles](#) can be found on the GLOBE website.

Visit the following links to explore the Earth System Data Explorer datasets that may be used to support students who are exploring their communities using the GLOBE protocol bundles.

- [Air Quality Protocol Bundle](#)
- [Ocean Protocol Bundle](#)
- [Rivers and Lakes Protocol Bundle](#)
- [Soil Protocol Bundle](#)
- [Urban Protocol Bundle](#)
- [Weather Protocol Bundle](#)